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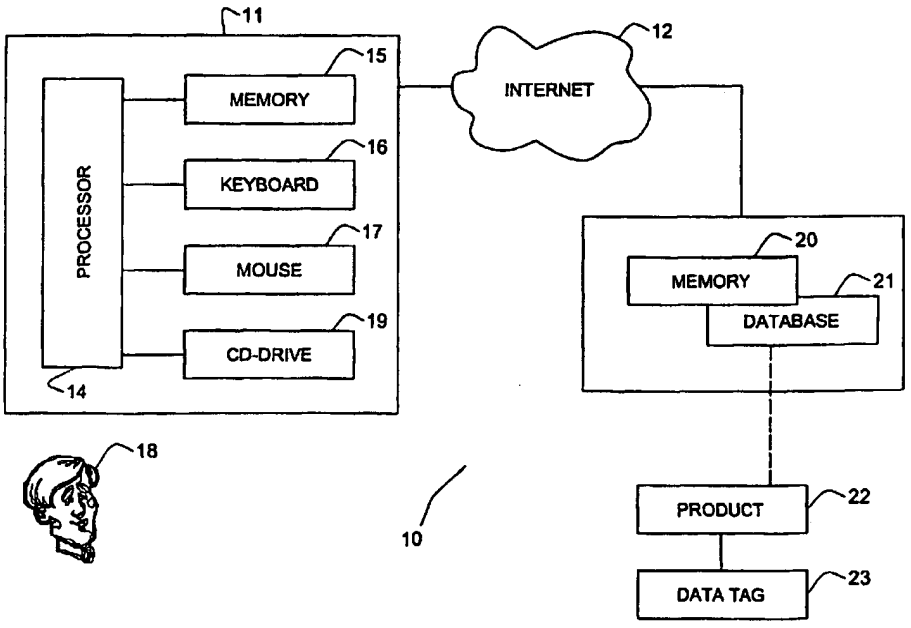
(54) Title: DATA TAG STORING INFORMATION ASSOCIATED WITH AN ARTICLE OF MANUFACTURE



(57) Abstract: A data tag comprising a computer readable medium bearing thereon computer readable program code capable of being run by a computer for automatically presenting to a user data relating to an article of manufacture associated with the data tag.

WO 02/09016 A2

Data tag storing information associated with an article of manufacture

FIELD OF THE INVENTION

This invention relates to data tags associated with articles of manufacture for providing information on how to use or maintain such articles of manufacture.

BACKGROUND OF THE INVENTION

Articles of manufacture are invariably sold with instructions to the client as to how to maintain the product in good condition and, where necessary, how to apply for service. Such instructions may range, at their simplest, to washing instructions for items of clothing to comprehensive guidance on the use of a new machine or software product. Usually, such instructions are attached to the product or enclosed within the same packaging used to transport the product prior to purchase and are restricted in scope to maintenance and use of the product.

It is also not unusual for products, such as computer games and the like, to contain fliers informing the purchaser of other products either in the same range or produced by the same manufacturer. Such fliers clearly serve a marketing purpose. However, even in those cases where such fliers are enclosed together with a product, they are supplementary to any product instructions or guidebook.

In fact, sale of any product by a vendor to a purchaser is a clear sign that the purchaser's taste inclines towards products of this type and could provide valuable feedback to the vendor and, where appropriate, to the manufacturer. Indeed, product warrantee cards that must be completed by the purchaser and returned to the manufacturer undoubtedly provide such feedback although may not serve a direct marketing function.

It would clearly be in the interest of a product manufacturer to exploit the implied interest in his products by a purchaser to attempt to market other products to the purchaser. For example, a clothing manufacturer having sold one article of clothing to a customer, might attempt to offer other items in the same range or complementary items. Such additional articles might possibly be offered at a discount or at favorable terms in order to entice the customer to make more purchases from the same manufacturer or vendor. Such an approach would also be beneficial to the customer who might thereby be spared the hassle of trying to match a recently purchased article of clothing and could be assured that a complementary article made by the same manufacturer would indeed provide a proper match in terms of both cloth and hue.

U.S. Patent No. 6,016,298 (Fischer) discloses a calling card appearing as a calling card CD that can be inserted into a conventional CD drive and read, such that its data is both visible to the eye, whilst having an underside on which data can be recorded and read by a computer. No suggestion is made to use the calling card CD to associate such data with an article of manufacture.

U.S. Patent No. 4831367 (Baus) discloses an information device comprising a user interface coupled to a storage unit containing information that may be used for sales promotion, and may contain details about a product or the like. Such a device may find application in supermarkets and department stores for presenting to customers information regarding the products on sale, their locations and their applications without their needing to rely on sales persons or sales counselors. Likewise, such a device may find application in exhibitions, airports or railroad stations, for imparting information regarding locations, destinations, railroad or flight connections.

JP 10334157 A2 assigned to Denso Corporation discloses an article sale analytic system allowing sale analysis of articles with unique features like jewels and valuables. A tag reader reads article management data from an ID tag fitted to a jewel which is sold and also reads article management data out of the ID tag fitted to a stocked article such as a jewel left in a showcase. The article management data

have objectively numerated parameters showing the features of the jewel and an article management device analyzes the parameters on the basis of the article management data on the sold article and the article management data on the stock article to take a sale analysis for popular articles.

JP 11242452 A2 assigned to Toppan Printing Co Ltd. discloses an article price display system permitting a price tag to be used as, or combined with, an advertisement medium using a video image with the price tag and an advertisement medium for a signboard, and to obviate the need to replace or rewrite tags as prices are changed.

These references appear to teach associating a machine-readable data tag with an article of manufacture for providing point-of-sale information about the specific article of manufacture with which the data tag is associated. It further appears that these references are principally directed to aiding the sales outlet either in providing point-of-sale advertising information or in collating sales statistics and parameters for sales analysis and control.

However, these references do not appear to address the need for the purchaser to obtain up-to-date data about a purchased product or other related products, particularly after the sale has been effected and the customer is no longer proximate the sales outlet and thus has no direct access to the store's or the manufacturer's database. Such up-to-date data is, of course, provided when goods are sold on-line over the Internet. However, in spite of the increasing impact of the Internet it is still accessible to only a small computer literate percentage of the population: most people remaining unable or unwilling to learn how to surf the web. Even for those who do use the Internet, searching a manufacturer's database to locate information about a specific product is time-consuming and awkward and this militates against widespread acceptance of web surfing as a means for disseminating information about a product or product range. Thus, as an advertising, marketing or sales promotion aid it is unacceptable.

SUMMARY OF THE INVENTION

It is therefore an object of the invention to provide a data tag that may be associated with an article of manufacture and allows a purchaser to extract data associated with the article of manufacture remote from the store where the article was purchased or remote from the manufacturer thereof.

To this end there is provided with a broad aspect of the invention a data tag comprising a computer readable medium bearing thereon computer readable program code capable of being run by a computer for automatically presenting to a user data relating to an article of manufacture associated with the data tag. Within the context of the description and appended claims, the terms "computer" and "client machine" embrace any suitable client machine having at least data processing and display facility such as a PC, hand-held computer, mobile telephone and so on. Also, within the context of the description and appended claims, it is to be understood that the data associated with the article of manufacture may relate to the article itself, or to other related articles or to the manufacturer, vendor or distributor thereof or, in general, to data having any direct or indirect connection to the article.

Also according to the invention there is provided a method for promoting ancillary services associated with an article of manufacture, said method comprising the following steps all carried out by a vendor, distributor or manufacturer of said article of manufacture:

(a) obtaining a data tag comprising a computer readable medium bearing thereon computer readable program code capable of being run by a user's computer for automatically presenting to the user data relating to the article of manufacture, and

(b) associating the data tag with the article of manufacture so as to be conveyed to a user of the article of manufacture upon acquisition thereof.

According to yet another aspect of the invention, there is provided a method for obtaining ancillary services associated with an article of manufacture via a

communication network accessed by a client machine operated by an owner of the article of manufacture, said method comprising the following steps all carried out by the client machine:

(a) effecting communication with a web server coupled to the communication network in response to insertion into said client machine of a data tag comprising a computer readable medium bearing thereon computer readable program code capable of being run by said client machine for automatically connecting the client machine to the web server,

(b) sending to the web server data stored in the data tag associated with the article of manufacture or an aspect thereof so as to allow the web server to access a database for extracting data therefrom pertaining to the article of manufacture,

(c) downloading said data to the client machine, and

(d) rendering the data sensible at the client machine.

The data stored in the data tag may be representative of audio and/or video data so as to allow a multimedia presentation to be automatically rendered audible or visible on the client machine on inserting the data tag therein. Likewise, the data may relate to smell and touch allowing the user to sense products remotely. Remote sensing of smell and touch are becoming increasingly common with regard to virtual reality applications and the manner in which data relating to smell and touch may be rendered sensible does not require further discussion here other to note that the data stored in the tag is not limited to any one sense, such as audio or video and may of course allow for multiple senses to be rendered at the client machine.

BRIEF DESCRIPTION OF THE DRAWINGS

In order to understand the invention and to see how it may be carried out in practice, a preferred embodiment will now be described, by way of non-limiting example only, with reference to the accompanying drawings, in which:

Fig. 1 is a block diagram showing functionally a system according to the invention including an optically readable data tag readable by a CD-ROM; and

Fig. 2 is a flow diagram showing the principal operating steps carried out by a program stored on the data tag shown in Fig. 1;

Fig. 3 is a flow diagram showing the principal operating steps carried out by a web server in communication with the data tag shown in Fig. 1;

Fig. 4 is a flow diagram showing the principal operating steps in a business method carried out by a vendor for promoting services associated with the data tag show in Fig. 1;

Fig. 5 is a flow diagram showing the principal operating steps in a method carried out by a service agent for providing services associated with the data tag show in Fig. 1; and

Fig. 6 is a pictorial representation of a data tag according to the invention.

DETAILED DESCRIPTION OF THE INVENTION

Fig. 1 shows a system depicted generally as 10 comprising a client machine 11 coupled via the Internet 12 to a web server 13. The client machine 11 may be a PC including a processor 14 coupled to a memory 15 for operating according to an instruction set stored in the memory 15. Also coupled to the processor 14 is a user interface including a keyboard 16 and a mouse 17 operated by a user 18. Web browser software stored in the memory 15 allows the user 18 to surf the World Wide Web and access a website via the web server 13 by inputting to the web browser the URL of the website. A CD-drive 19 controlled by the processor 14 allows insertion of a compact disc in known manner. Preferably, the CD-drive 19 has the ability to both read a compact disc inserted therein and to write to the compact disc, for reasons that are explained below.

The web server 13 includes memory 20 for storing a database 21, which itself may be partitioned so as to allow indexing of data relating to a product profile and to consumers of at least some of those products. To this end, products 22 are sold together with a data tag 23 either in the form of a compact disc or in a form compatible therewith, and storing information relating to the product and possibly to the manufacturer thereof. The products 22 constitute articles of manufacture,

which may be sold directly by the manufacturer or by a vendor to whom they are distributed by a distributor or importer. These actors are commercial operators who wish not only to promote their products but also themselves. To this end, the data tag 23 may provide standalone information about any of these actors, depending of course on the nature of the product and how it is marketed. The data tag 23 is used by an owner of the article of manufacture with which the data tag 23 is sold in order to obtain ancillary data associated with the article of manufacture. Within the context of the present description and appended claims, the term "owner" encompasses any person acquiring the data tag 23. This may include the purchaser or someone else to whom the data tag 23 is transferred. For example, the owner may acquire the article of manufacture and associated data tag 23 as a gift. More significantly, the "owner" may be a service provider or other contractor who temporarily acquires access to the article of manufacture and associated data tag 23 from the purchaser.

Most essentially, the data tag 23 stores standalone data relating to the product and preferably includes code for auto-running when the data tag 23 is inserted into the CD-drive 19 of the client machine 11, when operational. Such data may be representative of audio and/or video data so as to allow a multimedia presentation to be automatically rendered on the client machine on inserting the data tag therein. The data stored in the data tag 23 may relate to advertising or marketing information for promoting the article of manufacture or the manufacturer, vendor or distributor thereof as noted above. More simply, the data may not be promotional but rather instructions on how to use or maintain or install the product. Moreover, since such instructions are readable by any compatible computer, the data tag 23 may serve as a vehicle for imparting critical data to third parties not directly associated either with the manufacturer, distributor, and vendor trio or with the purchaser. For example, if the article of manufacture is a domestic electrical appliance or a motor vehicle, the third party may be a service contractor commissioned to repair and/or maintain the article of manufacture in good working condition. If desired, the CD-drive 19 in the client machine 11 operated by the

service contractor data tag 23 may have both read and write facility. In such case, services and/or checks carried out by the service contractor may be written to the data tag 23, allowing it to serve as an updated logbook.

By way of further example, if the article of manufacture is an article of clothing, the data tag 23 may store washing instructions readable by a launderette operator so as to ensure that cleaning of the product is carried out in accordance with the manufacturer's directives. Likewise, the data tag 23 may store information relating to other items in the same range or complementary items manufactured by the same manufacturer or available form the same vendor and so on.

By way of yet further example, the data card may be sold as a bookmark with a book and may provide information relating to other books by the same author or published by the same publisher, special offers, and so on.

Moreover, for use with computers coupled through the Internet 12 to the web server 13, the data tag 23 may include program code including the URL of the web server so as to allow automatic connection thereto merely by inserting the data tag 23 into the CD-drive 19 of the client machine 11, after power-up thereof. Such connection having been initiated, the web server 13 may access the database 21 and download to the client machine 11 product or manufacturer's data, which may also include data relating to a product range relating to the article of manufacture with which the data tag 23 was sold. Thus, for example, data may be extracted from the database complementing the article of manufacture with which the data tag 23 was sold. In the case where the web server 13 is operated by the product vendor, an order form may be downloaded to the client machine 11 allowing the user 18 to fill in the order form using the user interface and thus to order further products. The order form may further be configured to provide the vendor, manufacturer or distributor with valuable feedback relating to the client and to serve as a vehicle for customer surveys and the like.

Likewise, the web server 13 may download to the client machine 11 a mobile program such as a Java applet for extracting information written to a form downloaded from the web server 13 to the client machine 11 and sending it back to

the web server 13. Java is a registered trademark of Sun Microsystems Inc. Such data may include consumer profile data relating to the user 18 for storage in the database 21. The Java applet may also be stored within the data tag 23 thus obviating the need to download it from the web server 13. The profile data may include personal data of the user 18 allowing the web server 13 to filter information based on the user's profile and thus to send promotional data to the client machine 11 most suited to the user's interests, tastes, income and so on.

Fig. 2 is a flow diagram showing the principal operating steps carried out by the web server 13 for promoting ancillary services associated with articles of manufacture. Thus, the web server effects communication with the owner of the article of manufacture in response to insertion into the client machine 11 of the data tag 23. The data tag 23 comprises a computer readable medium bearing thereon computer readable program code capable of being run by the client machine 11 for automatically connecting the client machine 11 to the web server 13. This being done, the web server 13 receives data stored in the data tag 23 characterizing the article of manufacture or an aspect thereof, and accesses the database 21 for extracting data therefrom pertaining to the article of manufacture. The extracted data is then downloaded to the client machine 11.

As also shown, a mobile program may be downloaded by the web server 13 to the client machine 11 for extracting profile data and sending this to the web server 13 for storage in the database 21. The web server 13 uses the user profile for extracting from the database promotional data most suited to the needs and purchasing power of the user.

Fig. 3 is a flow diagram showing the principal operating steps carried out by the client machine 11, upon insertion therein of the data tag 23 associated with an article of manufacture acquired by an owner thereof. Computer readable program code stored in the data tag 23 is run by the client machine 23 for automatically connecting the client machine 11 to the web server 13. The client machine 11 sends to the web server 13 data stored in the data tag 23 characterizing the article of manufacture or an aspect thereof so as to allow the web server 13 to access the

database 21 as explained above for extracting data therefrom pertaining to the article of manufacture. The client machine 11 downloads the extracted data and renders the data visible and/or audible.

As also shown, the client machine 11 runs a Java applet either stored in the data tag 23 or downloads the Java applet from the web server 13 for extracting user profile data, which is then sent to the web server.

Fig. 4 is a flow diagram showing the principal operating steps carried out by a vendor or by an agent acting on his behalf for promoting goods and/or services associated with an article of manufacture sold with the data tag 23. As noted above, the agent can be a distributor, manufacturer, importer, or any other agent acting having a business interest in promoting the article of manufacture or similar or complementary products. The vendor (or other agent) associates the data tag 23 with the article of manufacture so as to be conveyed to a user of the article of manufacture upon acquisition thereof.

Fig. 5 is a flow diagram showing the principal operating steps carried out by a service agent who services the article of manufacture. For example, if the article of manufacture is a motor vehicle, the service agent may be a garage that repairs and maintains the vehicle in proper working condition. The service agent obtains the data tag 23 from the vehicle owner and inserts it into the service agent's computer CD-drive so as to read and display log data and/or other relevant data. After performing a service, relevant log data may be written back to the data tag 23 so as to maintain up-to-date log data therein. By such means, the service agent does not need to store the log data at his own facility, thus reducing the memory requirements and also the security of client-specific data, which need no longer be stored by the service agent.

Fig. 6 shows pictorially a data tag 25 that is intended for distribution with books and is shaped as a book. In like manner, the data tag 23 (shown generally in Fig. 5) may have an outward appearance that resembles the object with which the data tag is associated, such as an item of laundry, supermarket bag and so on.

It will be understood that modifications may be effected to the invention without departing from the scope of the invention as defined by the appended claims. Thus, the web server 13 may be distributed and different functions thereof may be performed by distributed or partitioned devices. As noted above, the database need not be monolithic but it too can be distributed. The data tag 23 has been described with particular reference to a compact disc; but clearly any computer readable medium is suitable providing that sufficient data can be stored for the purpose of carrying out the invention. In the case where Internet access is in any case contemplated, only minimum data need be stored on the data tag 23 and it is certainly feasible to use a magnetic carrier instead of a compact disc.

It will also be understood that the system according to the invention may be a suitably programmed computer. Likewise, the invention contemplates a computer program being readable by a computer for executing the method of the invention. The invention further contemplates a machine-readable memory tangibly embodying a program of instructions executable by the machine for executing the method of the invention.

In the method claims that follow, alphabetic characters used to designate claim steps are provided for convenience only and do not imply any particular order of performing the steps.

CLAIMS:

1. A data tag comprising a computer readable medium bearing thereon computer readable program code capable of being run by a computer for automatically presenting to a user data relating to an article of manufacture associated with the data tag.

2. The data tag according to Claim 1, wherein the computer readable program code includes code for auto-running when the data tag is inserted into a computer if the computer is operational.

3. The data tag according to Claim 1 or 2, wherein the user is a service provider who uses the data tag to obtain instructions or other information for carrying out effective service associated with the data tag.

4. The data tag according to any one of Claims 1 to 3, wherein the computer readable program code includes code for allowing connection of the computer to a web site of a service supplier associated with said article of manufacture.

5. The data tag according to Claim 4, including thereon a web site address of said service supplier, said web site address being readable by the program code.

6. The data tag according to Claim 4, wherein the program code is adapted to read a web site address of said service supplier from a memory of said computer.

7. The data tag according to any one of Claims 3 to 6, wherein the data tag is adapted to be written to by the service provider so as to store a service log in the data tag.

8. The data tag according to any one of Claims 1 to 6, wherein the data relates specifically to a manufacturer of said article of manufacture.

9. The data tag according to any one of Claims 1 to 6, wherein the data relates specifically to a vendor of said article of manufacture.

10. The data tag according to any one of Claims 1 to 6, wherein the data relates specifically to a distributor or importer of said article of manufacture.

11. The data tag according to any one of Claims 1 to 10, being an optical disc.

12. The data tag according to any one of Claims 1 to 11, further storing therein a mobile program for operating in association with a web server coupled to said computer.

13. The data tag according to any one of Claims 1 to 12, having an outward appearance that resembles or is associated with an article of manufacture associated with the data tag.

14. A method for promoting ancillary services associated with an article of manufacture, said method comprising the following steps all carried out by a vendor or distributor of said article of manufacture:

(a) obtaining a data tag comprising a computer readable medium bearing thereon computer readable program code capable of being run by a user's computer for automatically presenting to the user data relating to the article of manufacture, and

(b) associating the data tag with the article of manufacture so as to be conveyed to a user of the article of manufacture upon acquisition thereof.

15. The method according to Claim 14, wherein said ancillary services relate to sales promotions of goods or services associated with the article of manufacture, there being further included the steps of:

(c) operating a web site for promoting said goods or services, and

(d) upon said user connecting to the web site, conveying promotional data to the user via the Internet.

16. The method according to Claim 14 or 15, further including:

(e) receiving information relating to the user of the article of manufacture, and

(f) maintaining a database include a user profile of said user.

17. The method according to Claim 16, further including:

(g) downloading to a client machine operated by said user a mobile program for extracting data input by the user defining his or her user profile.

18. The method according to Claim 16 or 17, further including:

(h) screening the database in order to extract therefrom data best suited to the user based on the user's profile.

19. The method according to Claim 14 or 15, wherein the user is a service provider who uses the data tag to obtain instructions or other information for carrying out effective service associated with the data tag.

20. The method according to Claim 14, wherein step **(b)** includes attaching the data tag to the article of manufacture.

21. The method according to Claim 14, wherein step **(b)** includes inserting the data tag within a package containing the article of manufacture.

22. A method for promoting ancillary services associated with an article of manufacture via a communication network accessed by a client machine operated by an owner of the article of manufacture, said method comprising the following steps all carried out by a web server coupled to the communication network:

(a) effecting communication with the owner of the article of manufacture in response to insertion into said client machine of a data tag comprising a computer readable medium bearing thereon computer readable program code capable of being run by said client machine for automatically connecting the client machine to the web server,

(b) receiving data stored in the data tag characterizing the article of manufacture or an aspect thereof,

(c) accessing a database for extracting data therefrom pertaining to the article of manufacture, and

(d) downloading said data to the client machine.

(i) receiving information relating to the user of the article of manufacture, and

(j) maintaining a database include a user profile of said user.

23. The method according to Claim 22, further including:

(k) receiving information relating to the user of the article of manufacture, and

(l) maintaining a database include a user profile of said user.

24. The method according to Claim 23, further including:

(m) sending to the client machine a mobile program for extracting data input by the user defining said user profile.

25. The method according to Claim 23 or 24, further including:

(n) screening the database in order to extract therefrom data best suited to the user based on the user's profile.

26. A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for promoting ancillary services associated with an article of manufacture via a communication network accessed by a client machine operated by an owner of the article of manufacture, said method comprising the following steps:

(a) effecting communication with the owner of the article of manufacture in response to insertion into said client machine of a data tag comprising a computer readable medium bearing thereon computer readable program code capable of being run by said client machine for automatically connecting the client machine to the web server,

(b) receiving data stored in the data tag characterizing the article of manufacture or an aspect thereof,

(c) accessing a database for extracting data therefrom pertaining to the article of manufacture, and

(d) downloading said data to the client machine.

27. A computer program product comprising a computer useable medium having computer readable program code embodied therein for promoting ancillary services associated with an article of manufacture via a communication network accessed by a client machine operated by an owner of the article of manufacture, said computer program product comprising:

computer readable program code for causing the computer to effect communication with the owner of the article of manufacture in response to insertion into said client machine of a data tag comprising a computer readable

medium bearing thereon computer readable program code capable of being run by said client machine for automatically connecting the client machine to the web server,

computer readable program code for causing the computer to receive data stored in the data tag characterizing the article of manufacture or an aspect thereof,

computer readable program code for causing the computer to access a database for extracting data therefrom pertaining to the article of manufacture, and

computer readable program code for causing the computer to download said data to the client machine.

28. A method for obtaining ancillary services associated with an article of manufacture via a communication network accessed by a client machine operated by an owner of the article of manufacture, said method comprising the following steps all carried out by the client machine:

(a) effecting communication with a web server coupled to the communication network in response to insertion into said client machine of a data tag comprising a computer readable medium bearing thereon computer readable program code capable of being run by said client machine for automatically connecting the client machine to the web server,

(b) sending to the web server data stored in the data tag characterizing the article of manufacture or an aspect thereof so as to allow the web server to access a database for extracting data therefrom pertaining to the article of manufacture,

(c) downloading said data to the client machine, and

(d) rendering the data visible and/or audible at the client machine.

29. The method according to Claim 28, further including:

(o) running a mobile program for extracting user profile data input by the user defining his or her user profile, and

(p) sending the user profile data to the web server.

30. The method according to Claim 28 or 29, further including:

(q) downloading the mobile program to the client machine from the web server.

31. A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for obtaining ancillary services associated with an article of manufacture via a communication network accessed by a client machine operated by an owner of the article of manufacture, said method comprising the following steps:

(a) effecting communication with a web server coupled to the communication network in response to insertion into said client machine of a data tag comprising a computer readable medium bearing thereon computer readable program code capable of being run by said client machine for automatically connecting the client machine to the web server,

(b) sending to the web server data stored in the data tag associated with the article of manufacture or an aspect thereof so as to allow the web server to access a database for extracting data therefrom pertaining to the article of manufacture,

(c) downloading said data to the client machine, and

(d) rendering the data sensible at the client machine.

32. A computer program product comprising a computer useable medium having computer readable program code embodied therein for obtaining ancillary services associated with an article of manufacture via a communication network accessed by a client machine operated by an owner of the article of manufacture, said computer program product comprising:

computer readable program code for causing the computer to effect communication with a web server coupled to the communication network in response to insertion of said computer program product into said client machine,

computer readable program code for causing the computer to send to the web server data stored in the computer program product characterizing the article

of manufacture or an aspect thereof so as to allow the web server to access a database for extracting data therefrom pertaining to the article of manufacture,

computer readable program code for causing the computer to download said data to the client machine, and

computer readable program code for causing the computer to render the data visible and/or audible at the client machine.

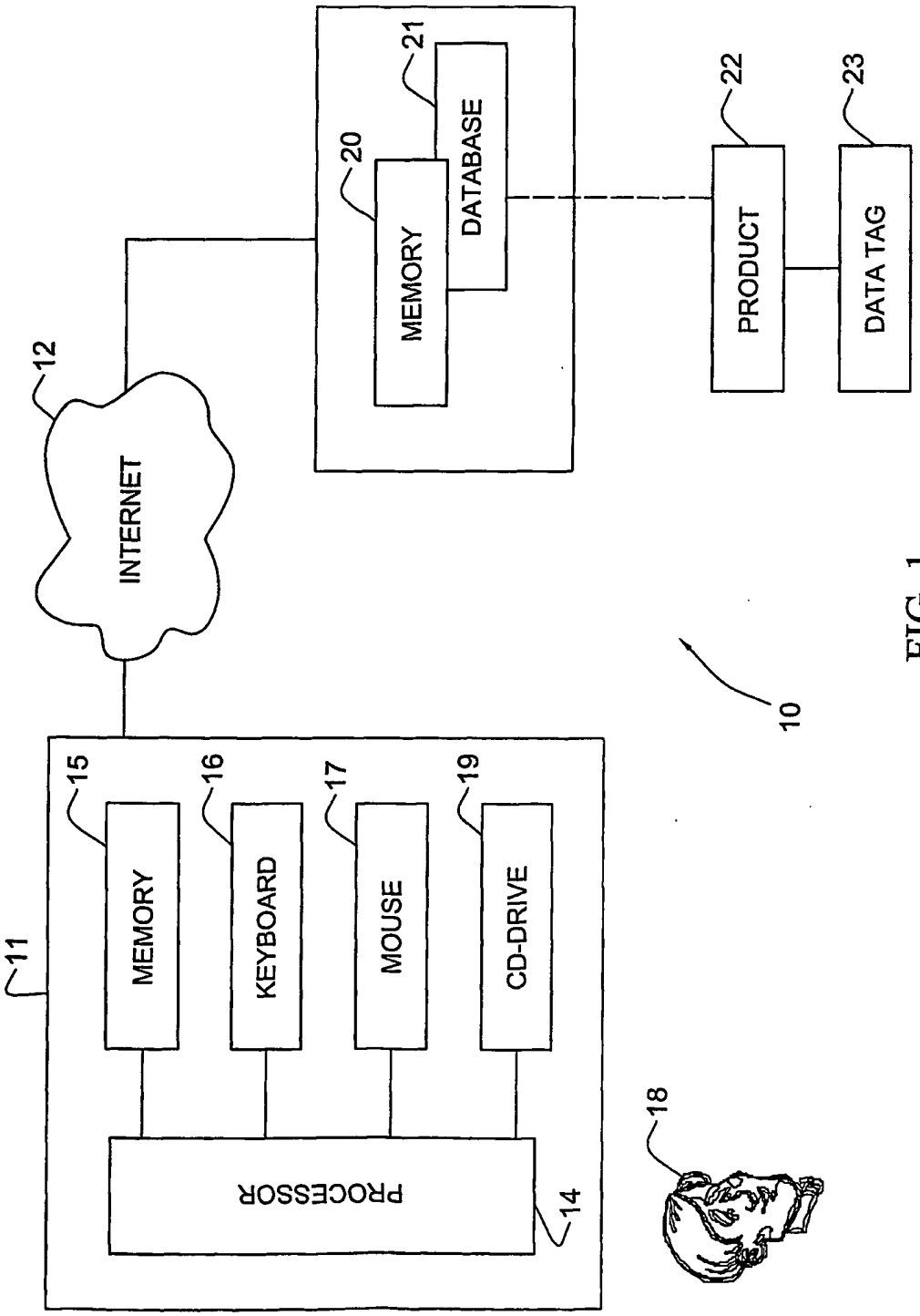

INTERNET
12
MEMORY
20
DATABASE
21
PRODUCT
22
DATA TAG
23
10
MEMORY
15
KEYBOARD
16
MOUSE
17
CD-DRIVE
19
11
PROCESSOR
14
18

FIG. 1

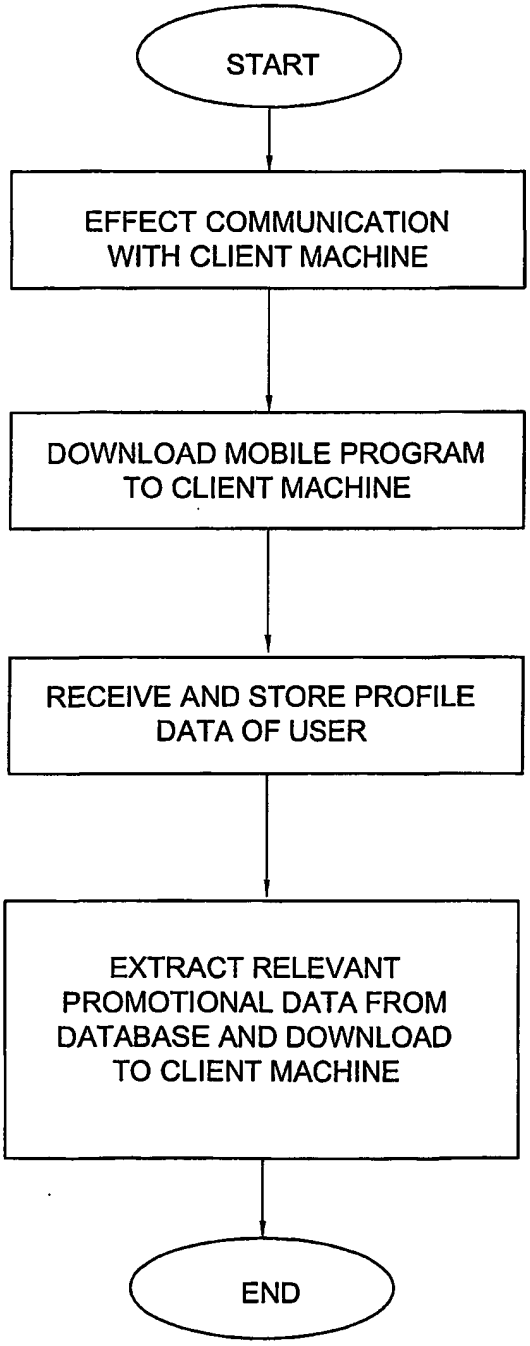

START
EFFECT COMMUNICATION WITH CLIENT MACHINE
DOWNLOAD MOBILE PROGRAM TO CLIENT MACHINE
RECEIVE AND STORE PROFILE DATA OF USER
EXTRACT RELEVANT PROMOTIONAL DATA FROM DATABASE AND DOWNLOAD TO CLIENT MACHINE
END

FIG. 2

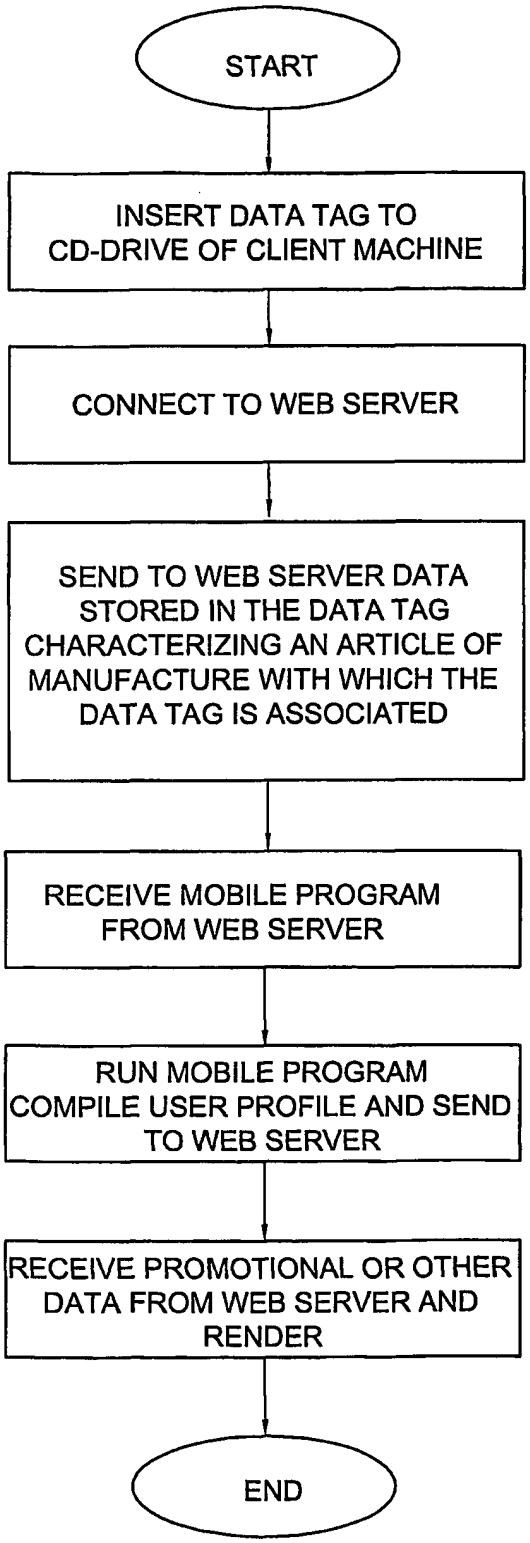

START
INSERT DATA TAG TO CD-DRIVE OF CLIENT MACHINE
CONNECT TO WEB SERVER
SEND TO WEB SERVER DATA STORED IN THE DATA TAG CHARACTERIZING AN ARTICLE OF MANUFACTURE WITH WHICH THE DATA TAG IS ASSOCIATED
RECEIVE MOBILE PROGRAM FROM WEB SERVER
RUN MOBILE PROGRAM COMPILE USER PROFILE AND SEND TO WEB SERVER
RECEIVE PROMOTIONAL OR OTHER DATA FROM WEB SERVER AND RENDER
END

FIG. 3

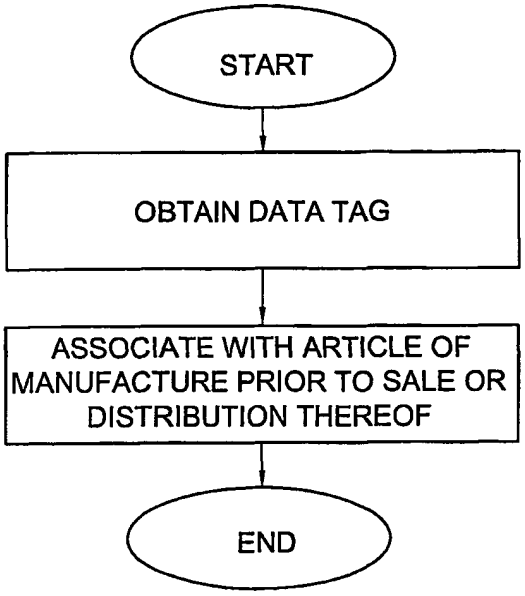

START
OBTAIN DATA TAG
ASSOCIATE WITH ARTICLE OF MANUFACTURE PRIOR TO SALE OR DISTRIBUTION THEREOF
END

FIG. 4

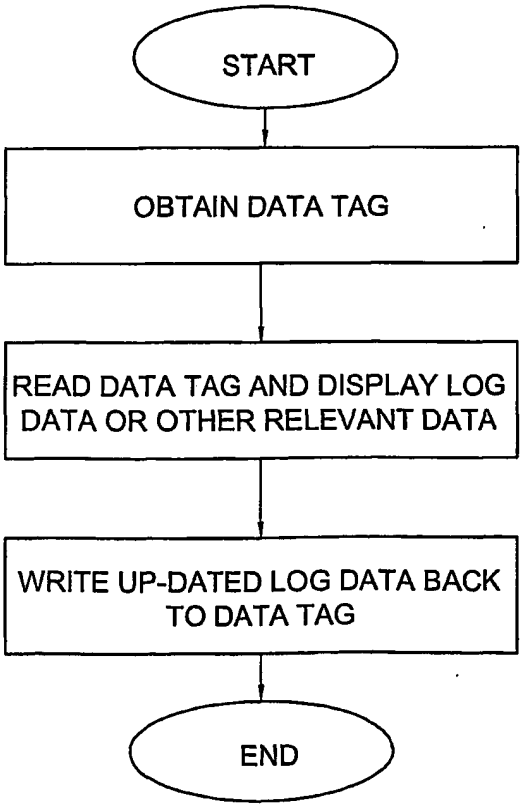

START
OBTAIN DATA TAG
READ DATA TAG AND DISPLAY LOG DATA OR OTHER RELEVANT DATA
WRITE UP-DATED LOG DATA BACK TO DATA TAG
END

FIG. 5

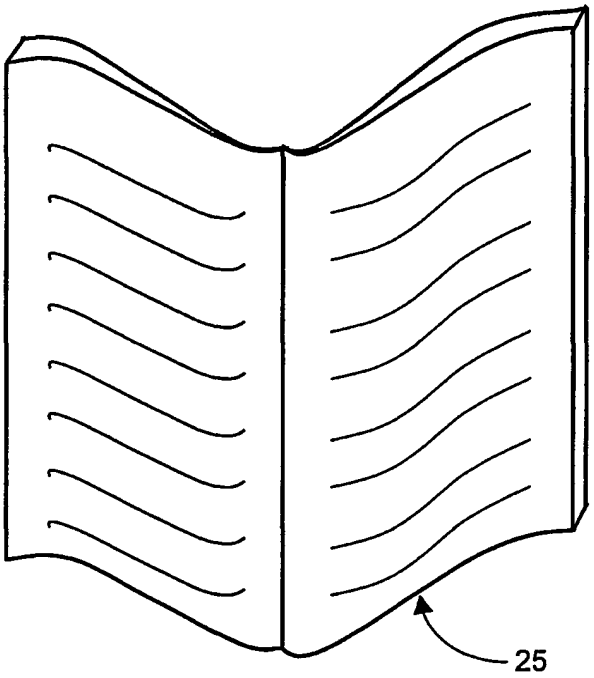


FIG. 6